What is claimed is:

1. A method for measuring aldehyde present in a polymer, comprising the steps of:

(a) extracting gaseous aldehyde from a polymer into a confined space;

(b) reacting said gaseous aldehyde with an aldehyde-reactive reagent on a reagent carrier in said confined space;

(c) contacting said aldehyde-reactive reagent with a reagent solution to obtain a detectable response; and

(d) measuring a response to obtain an aldehyde reading.

2. The method of claim 1, wherein said extracting step further includes a step of raising the temperature of said polymer.

3. The method of claim 1, further including the step of agitating said reagent solution for reducing the duration of said contacting step.

4. The method of claim 1, further including the step of heating said reagent solution for reducing the duration of said contacting step.

5. The method of claim 1, wherein said measuring step is a visual comparison of said response with a chart.

6. The method of claim 1, wherein said measuring step includes a photometric instrument for measuring said response.

7. The method of claim 1, wherein said measuring step is conducted using a transmission mode.

8. The method of claim 1, wherein said measuring step is conducted using a reflectance mode.

9. The method of claim 1, wherein said reagent solution is present in excess quantity for dissolving said reacted aldehyde-reactive reagent for forming a homogeneous solution.

10. The method of claim 1, wherein said confined space is an airtight container, said polymer disposed in said container.

11. The method of claim 1, wherein said confined space is formed by the combination of a preform and closure.

12. The method of claim 1, wherein said confined space is formed by the combination of a bottle and closure.

13. The method of claim 1, wherein said polymer is a preform.

14. The method of claim 1, wherein said polymer is a bottle.

15. The method of claim 1, 14, 15 wherein said polymer is in pieces.

16. The method of claim 1, wherein said aldehyde-reactive reagent comprises a compound selected from the group consisting of 3-methyl-2-benzothiazolinone hydrazone hydrochloride, 4-amino-3-hydrazino-5-mercapto-1,2,4-triazole, 2-hydrazinobenzothiazole, 2,4-dinitrophenylhydrazone, 5-dimethylaminonaphthalene-1-sulfohydrazide, 2-diphenylacetyl-1,3-indandione-1-hydrazone, 2-hydrazinobenzothiazole-4 -nitrobenzenediazonium fluoborate, p-nitrobenzalhydrazone, 1,3-cyclohexanedione, 3,5-diaminobenzoic acid, 5,5-dimethylcyclohexane-1,3-dione, 2-hydroxycarbazole, dimedone and indole.

17. A method for measuring acetaldehyde present in a polyester polymer, comprising the steps of:

(a) extracting gaseous acetaldehyde from a polymer into a confined space;

(b) reacting said gaseous acetaldehyde with an aldehyde-reactive reagent disposed on an indicator in said confined space;

(c) contacting the aldehyde-reactive reagent with an oxidizer solution to obtain a color change in said oxidizer solution; and

(d) measuring the color response to obtain an acetaldehyde reading.

18. The method of claim 17, wherein said extracting step further includes a step of raising the temperature of said polymer.

19. The method of claim 17, further including the step of agitating said reagent solution for reducing the duration of said contracting step.

20. The method of claim 17, further including the step of heating said reagent solution for reducing the duration of said contracting step.

21. The method of claim 17, wherein said measuring step is a visual comparison of said response to a chart.

22. The method of claim 17, wherein said measuring step is conducted with a spectrophotometer.

23. The method of claim 17, wherein said confined space is an airtight container, said polymer disposed within said container

24. The method of claim 17, wherein said confined space is formed by the combination of a preform and closure.

25. The method of claim 17, wherein said confined space is formed by the combination of a bottle and closure.

26. The method of claim 17, wherein said polymer is a preform.

27. The method of claim 17, wherein said polymer is a bottle.

28. The method of claim 17, 26, or 27, wherein said polymer is in pieces.

29. The method of claim 17, wherein said aldehyde-reactive reagent is 3-methyl-2-benzothiazolinone hydrazone hydrochloride.

30. The method of claim 17, wherein said indicator comprises an aldehyde-reactive reagent coated on a solid particulate carrier applied to a support strip.

31. The method of claim 17, wherein said oxidizer solution is an aqueous solution of ferric chloride.

32. The method of claim 17, wherein said oxidizer solution is an aqueous solution of potassium ferricyanide.

33. The method of claim 17, wherein said oxidizer solution is an aqueous solution of lead tetraacetate.

34. The method of claim 17, wherein said oxidizer solution is an aqueous solution of periodic acid.

35. A method of making an indicator for testing aldehyde in polymer, comprising the steps of:

(a) contacting a solution of aldehyde-reactive reagent with a carrier; and

(b) drying the reagent in an atmosphere non-reactive with said reagent to form an aldehyde-reactive reagent coated carrier.

36. The method of claim 35 further including the step of applying said coated carrier to a support.

37. The method of claim 36 wherein the solvent for forming said solution is water.

38. The method of claim 36 wherein the solvent for forming said solution is an organic solvent.

39. The method of claim 36 wherein the pH of said solution is optimized to promote solubilization of said aldehyde-reactive reagent.

40. The method of claim 36 wherein said carrier is a plurality of particles.

41. The method of claim 36 wherein said carrier is a plurality of beads.

42. The method of claim 36 wherein said carrier is a film.

43. The method of claim 36 wherein said carrier is a membrane.

44. The method of claim 36 wherein said carrier is a fiber.

45. The method of claim 36 wherein said carrier is a sheet.

46. The method of claim 36 wherein said carrier is a foam.

47. The method of claim 36 wherein said carrier is alumina.

48. The method of claim 36 wherein said carrier is a silaca gel.

49. The method of claim 36 wherein said carrier is glass.

50. The method of claim 36 wherein said carrier is kaolin.

51. The method of claim 36 wherein said carrier is diatomaceous earth.

52. The method of claim 36 wherein said carrier is ceramic.

53. The carrier of claim 36 wherein said carrier is a synthetic polymer.

54. The method of claim 36 wherein said drying step is conducted with heat.

55. The method of claim 54 wherein said heat is supplied by a vacuum oven.

56. The method of claim 54 wherein said heat is supplied by a water bath.

57. The method of claim 54 wherein said heat is supplied by a heater tape.

58. The method of claim 54 wherein said heat is supplied by a heater mantle.

59. The method of claim 54 wherein said heat is supplied by a heater block.

60. The method of claim 54 wherein said heat is supplied by an infrared lamp.

61. The method of claim 54 wherein said heat is supplied by a microwave.

62. The method of claim 36 wherein said atmosphere is provided by a vacuum.

63. The method of claim 36 wherein said atmosphere is provided by a continuous flow of a dry non-reactive gas.

64. The method of claim 36 wherein said carrier and said support are inert to said aldehyde-reactive reagent.

65. The method of claim 36 wherein said carrier is adhesively bonded to said support.

66. The method of claim 36 wherein said carrier is physically immobilized to said support.

67. The method of claim 36 wherein said carrier is a support.

68. A method of making an indicator for testing acetaldehyde in polyester polymer, comprising the steps of:
    (a) contacting a solution of aldehyde-reactive reagent with a particulate carrier;
    (b) drying the reagent coated particulate carrier in an atmosphere non-reactive with said reagent to form aldehyde-reactive reagent coated carrier;
    (c) applying a thin layer of the coated particulate carrier to an adhesive tape inert to said reagent;
    (d) bonding said tape to a support.

69. The method of claim 68 wherein said tape is single sided.

70. The method of claim 68 wherein said tape is double sided.

71. The method of claim 68, 69, or 70 wherein said tape covers a portion of said support.

72. The method of claim 68 wherein said solution is prepared by dissolving 3-methyl-2-benzothiazoline hydrazone hydrochloride hydrate in water.

73. The method of claim 72 wherein the concentration of said 3-methyl-2-benzothiazoline hydrazone hydrochloride solution is between 0.5 to 3% by weight.

74. The method of claim 68 wherein said particulate carrier comprises alumina.

75. The method claim 74 wherein said alumina is less than 180 μm in size.

76. The method of claim 68 wherein said indicator includes a detection limit of at least 0.5μg of acetaldehyde.

77. The method of claim 68 wherein said drying step is conducted in heat and a vacuum.

78. A kit for measuring aldehyde in a polymer, comprising:
(a) at least one seal for forming an airtight confined space,
(b) an aldehyde-reactive reagent coated carrier on a support, and
(c) a reagent solution.

79. A kit as in claim 78 wherein said seal is a closure suitable for forming an airtight confined space within a molded part to contain aldehyde extracted from said polymer..

80. A kit as in claim 78 wherein said seal is a container suitable for forming an airtight confined space around a molded part to contain aldehyde extracted from said polymer.

81. The kit as in claim 78 wherein said kit further includes a closure equipped with a septa for sealing a molded part, and an air-tight syringe to sample headspace gas from said confined space.

82. The kit as in claim 78 wherein said kit further includes a chart for determining the amount of reacted aldehyde.

83. The kit as in claim 78 wherein said kit further includes a spectrophotometer for determining the amount of reacted aldehyde.

84. The kit as in claim 78 wherein said kit further includes a correlation table for correlating the aldehyde detected with the aldehyde content of said polymer.

85. The kit as in claim 78 wherein said carrier is a plurality of particles.

86. The kit as in claim 78 wherein said carrier is a plurality of beads.

87. The kit as in claim 78 wherein said carrier is a film.

88. The kit as in claim 78 wherein said carrier is a membrane.

89. The kit as in claim 78 wherein said carrier is a fiber.

90. The kit as in claim 78 wherein said carrier is a sheet.

91. The kit as in claim 78 wherein said carrier is foam.

92. The kit as in claim 78 wherein said carrier and said support are disposed in a sealed package.

93. The kit as in claim 92 wherein said package is moisture and light resistant.

94. The kit as in claim 78 further including a fiber coated with an aldehyde-reactive reagent housed within a needle of a syringe.

95. The kit as in claim 78 wherein said aldehyde-sensitive reagent is 3-methyl-2-benzothiazolinone hydrazone hydrochloride.

96. The kit as in claim 78 wherein said reagent solution reacts with said aldehyde-reactive reagent providing a detectable response.

97. The kit as in claim 78 wherein said reagent solution is an aqueous solution of ferric chloride.

98. The kit as in claim 78 wherein said reagent solution is an aqueous solution of potassium ferricyanide.

99. The kit as in claim 78 wherein said reagent solution is an aqueous solution of lead tetraacetate.

100. The kit as in claim 78 wherein said reagent solution is an aqueous solution of periodic acid.

101. The kit as in claim 78 wherein said reagent solution is an acidified ferric chloride solution.

102. The kit as in claim 101 wherein said the concentration of said ferric chloride solution is between 0.5 to 3% by weight.

103. The kit as in claim 78, wherein said aldehyde-reactive reagent is selected from the group consisting of 3-methyl-2-benzothiazolinone hydrazone hydrochloride, 4-amino-3-hydrazino-5-mercapto-1,2,4-triazole, 2-hydrazinobenzothiazole, 2,4-dinitrophenylhydrazone, 5-dimethylaminonaphthalene-1-sulfohydrazide, 2-diphenylacetyl-1,3-indandione-1-hydrazone, 2-hydrazinobenzothiazole-4 - nitrobenzenediazonium fluoborate, p-nitrobenzalhydrazone, 1,3-cyclohexanedione, 3,5-diaminobenzoic acid, 5,5-dimethylcyclohexane-1,3-dione, 2-hydroxycarbazole, dimedone and indole.